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LA RICERCA SCIENTIFICA NEL PROCESSO DI
TRANSIZIONE ECOLOGICA IN AGRICOLTURA

Floristic-vegetational sciences and landscape ecology contributions for the accounting of agrobiodiversity and farmland ecological functionality: assessment of a certification scheme

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The current widespread degradation of the environmental matrices underlying the agricultural systems undermines their capacity to sustain the ecological processes across rural land. Applied ecological sciences, like landscape ecology and phytosociology, concur to meet the need of scientific applied knowledge building related to the comprehension of the ecological patterns and trends underlying the farmland agroecological design and management. In this context, the herepresented project aims at validating a model for the accounting of the contribution that agroecological farmland management can bring to agrobiodiversity values and, as a whole, to the recovery of the ecological functionality of farmland. This work is a direct contribution to the development of the already existing Biodiversitas label (a certification scheme for farms developed by Polyculturae Association, in collaboration with University of Milan and Marche Polytechnic University), through its test, calibration and validation. The assessment model is focused on a result-based evaluation of a diversified set of practices. Analysis are being led at different spatial and time scales, on paired agroecology and conventional farms. Floristic, vegetational and landscape ecology data are being collected and processed and then matched with other environmental variables (soil, faunal and agronomic management data). A set of environmental indicators is being evaluated, aiming at identifying their fitness for project purposes. Reference indicators, their target values and significant thresholds, target species (bioindicators) and the indicators mutual interaction patterns will be the final output of this comparative assessment, aiming at their integration within the technical standards of the certification system. The project also envisages a subsequent qualitative and quantitative assessment of the ecosystem services interlinked with the studied ecosystem functions, aiming at highlighting the existing trade-offs and synergies between the evaluated practices. The first results of the preliminary analyses will be here presented.